



**STATE OF NEVADA
DIVISION OF ENVIRONMENTAL PROTECTION
Bureau of Corrective Actions
Superfund Consolidated Program**

**First Quarter Report
July 1, 2017 – September 30, 2017**

Nevada SFY 2018
July 1, 2017 – June 30, 2018
Grant Identification FAIN: 99T28801

Superfund Consolidated Program

Task I: Administration

The Bureau of Corrective Actions, Superfund Branch provides support under the Superfund Consolidated Program for the multi-site cooperative agreement (MSCA), which includes the Carson River Mercury Site (CRMS) and Anaconda Copper Mine Site. This report includes a quarterly update for tasks completed from July 1, 2017 through September 30, 2017.

Sub-tasks

- A. Prepare final SFY2019 Superfund Consolidated Cooperative Grant application and work plan by 5/5/2018.

1st Qtr: No activity this quarter.

- B. Participate in annual End-of-Year grant program evaluation meeting with EPA.

1st Qtr: No activity this quarter.

- C. Participate in periodic project review meetings with EPA.

1st Qtr: Telephone conversations and conference calls were conducted during the quarter to continue discussion on the CRMS OU1 LTSRP, SAP, and CRMS OU2 schedule. Several planning calls were held in July and August in preparation for the third 5-year review of the CRMS OU1 remedy.

NDEP participated in the third five-year review of the OU1 remedy partnering with Andy Bain, CRMS RPM. The on-site five-year review team consisted of Karah Haskins and Ben McKenna with USACE. The five-year review was conducted over a two day period August 30-31 at the NDEP offices in Carson City, NV and on the CRMS in Dayton and Silver City, Lyon County, NV and Virginia City, Storey County, NV. August 30 included record and file review and interviews with NDEP staff Ryan Fahey and Andrew Dixon of the Storm water Pollution Prevention Program and Jacqueline Purcell, GIS Specialist.

The Stormwater Pollution Prevention Program explained to the team how required construction permits for ground surface disturbance to evaluate and assure proper erosion and sediment control and sanitary sewer plan review and permits for new residential subdivision development were used by the NDEP Bureau of Corrective Actions to track and monitor new residential development and home improvement projects in the CRMS. This on-going soil characterization and the management of potentially contaminated soil in yards at new home construction is a primary finding of the OU1 RoD. It has long been a concern with site management of the CRMS that NDEP's awareness of soil disturbance and notification of such activities by the effected municipalities is not comprehensive. The Long Term Sampling and Response Plan(LTSRP), the OU1 institutional control created to address the issue of new residential development in areas not fully characterized by the OU1 RI relies upon such information to be effective. NDEP has developed an internal notification system between its Clean Water Act programs in the Bureau of Water Pollution Control and the CRMS oversight program in the Bureau of Corrective Actions to help address the issue.

Jacqueline Purcell explained her role in developing and maintaining NDEP's environmental covenant geodatabase and interactive web map feature to the five-year review team. This geodatabase includes the shallow soil sampling data that has been collected on residential and non-residential properties since implementation of the LTSRP. The interactive web map will provide the public convenient access to most of this data in an easily searchable format enabling the use of street addresses, assessor's parcel number, GPS coordinates and visual recognition by "flying over" the CRMS satellite image map to locate a point of interest.

The creation of a website that includes the soil investigation and analytical chemistry information on a property-specific basis linked to an interactive web-based map began 5 years ago in response to a finding in the first OU1 ROD five year review. The geodatabase was built starting with properties that have an environmental covenant attached to the title of the property and the website and map layer providing this information was subsequently titled the "Environmental Covenant" website. Because the institution of the LTSRP predates the promulgation of the environmental covenant in Nevada law, a number of subdivisions were developed and managed under a draft LTSRP that used an alternative durable notification mechanism (DNM) to administer a residential property as potentially being impacted by historic CRMS contamination prior to the environmental covenant law.

The Santa Maria Ranch subdivision is one such example. A combination of remedies was used to meet the OU1 ROD requirements for mercury contamination in the surface soil of residential yards in Units 1 and 2 of the subdivision. Remediation was conducted using both removal of contaminated soil and a clean soil cap of a nominal 24-inch thickness. Notification and explanation of these remedies and the properties where they were made is included as an addendum to the Santa Maria Ranch Covenants Codes and Restrictions.

Additionally, a number of subdivisions developed in OU1 have been characterized following the draft LTSRP guidance, but there were no findings of contamination and the NDEP issued a "No Further Action" letter to these subdivision developers. The NDEP NFA letter is considered by NDEP to be the DNM on the subdivided properties where houses were built that future investigation for CRMS contamination will not be necessary subsequent to any future development or soil disturbance.

This quarter NDEP has uploaded to its CRMS geodatabase a number of residential parcels in subdivisions previously investigated and where no environmental covenant has been entered into with the property owner. In addition, completion of uploading the reports and environmental covenants on certain parcels potentially impacted in the Carson River Estates subdivision has been completed as well. Finally, a number of non-residential properties investigated for CRMS contaminants over the years following LTSRP methods and analyses have been added to the CRMS geodatabase. This will provide the public and interested parties with information that these properties were assessed under the NDEP LTSRP program and the data will be readily accessible. NDEP plans to change the website name to "*Environmental Covenants and Other Durable Notification Mechanisms*" to more accurately describe the information provided on these maps. The subdivision names included in these updates are described in detail in Task II.3.c.

August 31 included a visit to the OU1 removal action sites and visits to Storey County officials Karen Canfield, Planner, and Gary Hames, Building Department Director. These site visits are described in more detail in Task II.B.

D. Submit quarterly progress, activity, and financial status reports.

1st Qtr: The 1st quarter report for SFY 2018 meets the requirements defined in the approved work plan, which have been incorporated by reference into this quarterly report format.

E. Attend applicable conferences and training as agreed to by EPA Project Officer.

1st Qtr: Not applicable this quarter.

Task II: CRMS Support

Management OU-1: Provide NDEP oversight and specific task management with Remedial Response Activities for OU-1

Sub-tasks

A. Operable Unit 1 (OU-1) property development oversight and durable notification mechanisms:

Task A.1: Approval by EPA and NDEP management of the revised residential Long Term Sampling and Response Plan (LTSRP). Assist with the negotiation and approval of the Programmatic Agreement with the NV State Historical Preservation Office (SHPO).

1st Qtr: NDEP continued work on the Sampling and Analysis Plan that will be a companion document to the OU1 LTSRP. Specifically, NDEP made edits based on EPA R9 comments to the existing draft Sections 2.3 Data Quality Indicators, 2.4 Data Quality Objectives, and 3.0 Sampling Rationale and Design. NDEP also completed draft Section 4.0 Request for Analyses and a part of Section 5.0 Field Methods and Procedures including Section 5.1 Sampling Equipment and 5.2 Soil Sampling Procedures. NDEP began to write Section 5.3 Field Analytical Procedures and completed Section 5.3.1 Sample Preparation and Homogenization and Section 5.3.2 Sample Collection, but after beginning Section 5.3.3 FPXRF Field Analysis, NDEP received new standard operating procedures from Deana Crumbling with EPA ORD. These SOPs include FPXRF instrument calibration, assessing instrument precision and developing quality control charts. NDEP has been directed by EPA R9 to incorporate these SOPs into the draft SAP. NDEP is studying this new SOP and some 14 other related SOPs to the FPXRF SOPs to assure that the methodologies and procedures described in the draft SAP document are accurate and correct. In addition, remaining draft sections to be written include Section 6.0 Disposal of Investigation Derived Waste, Section 7.0 Sample Documentation, Identification and Shipment, and Section 8.0 Quality Assurance and Quality Control.

Task A.2: Continue working with property developers on residential sampling requirements and assist in the development of site characterization plans.

1st Qtr: Late this quarter, Hal Dawson received a McGinley & Associates (MGA) Response to Comments associated with a Final Phase II Site Assessment and Remedial Action Plan for Bella Vista Ranch and Butler Ranch along Steamboat Creek in Reno, Nevada. Not previously reported, Mr. Dawson provided MGA comments on the Draft Phase II Site Assessment and Remedial Action Plan for Bella Vista Ranch and Butler Ranch last quarter.

Task A.3: Review and approve site characterization plans.

1st Qtr: No OU1 site characterization plans this quarter. EPA and NDEP did learn that underground utility work was performed along Railroad Street, Dayton, NV in the vicinity of OU1 removal action site MS001. The utility work included trenching along Railroad Street for the purpose of sanitary sewer pipe replacement and a large lay-down and equipment yard on the property where the removal action and clean fill cap was placed. Lyon County Public Works did not notify either EPA or NDEP of this project. It was discovered inadvertently while EPA RPM Andy Bain was escorting US ACE staff on a driving tour of the removal action sites as part of the third Five-Year review of the OU1 remedy. NDEP contacted Lyon County Public Works staff Mike Workman to discuss the matter and Mr. Workman stated he did not realize notification was necessary. He stated that no excavation took place on the MS001 property and a leveling course of clean fill was placed to improve the area used for equipment and materials storage and lay-down. He stated that he would inform NDEP when the project

was finished so that sampling could be performed to verify capped contamination was not re-exposed. NDEP will follow-up with the property's owner to conduct sampling of the potentially disturbed area when the utility contractor has de-mobilized.

Task A.4: Review and assist in the interpretation of Contaminants of Concern (CoC) sampling results.

1st Qtr: No OU1 sampling results to review this quarter.

Task A.5: Assist in the development and review of mitigation plans through implementation of the LTSRP.

1st Qtr: No OU1 mitigation plans this quarter.

- B.** Implementation in collaboration with the Storey, Lyon, Carson and Churchill County Building Departments, identification of development in the CRMS of new single home construction or other surface disturbance activities - totaling less than one acre.

1st Qtr: As part of the third five-year review of the OU1 remedy, the USACE traveled to the Storey County Planner's office and Storey County Building Department office to assess the level of awareness these municipal officials have of the CRMS in their jurisdictions and the message a member of the public or new resident of the community might receive when acquiring the necessary permits for new construction and other earth disturbance activity. Andy Bain and Dave Friedman accompanied the USACE staff to these meetings. The five-year review team first met with Kathy Canfield of the Storey County Planning Department. Kathy stated that her department's role was fairly limited in its oversight on issues involving the CRMS. She stated that it primarily comes where a Special Use permit is sought for mining activities. In cases where permit applications are made that may involve near surface disturbance in areas of historic mining activity, the planning department directs the permit applicant to consult with NDEP and generally adds language to the county permit that requires the permittee comply with the NDEP recommendations. NDEP can attest to this partnership citing past examples.

At Kathy Canfield's suggestion, the five-year review team next went to meet with Gary Hames, the Storey County Building Department Director. Mr. Hames stated that he is new to the position, having taken the role from Dean Haymore, long time Storey County Building Department Director and former Storey County Commissioner, who had just retired. Mr. Hames listened to Andy Bain and the five year review team describe some of the notifications that are expected should someone apply for residential building or lot improvement permit in Virginia City and the CRMS, but it seemed clear the information was a bit overwhelming. Dave Friedman requested that Mr. Hames have a meeting with NDEP at a future date so NDEP can provide Mr. Hames with the information in a durable form. Gary Hames agreed to have such a meeting.

- C.** Improve visibility of environmental covenants:

Task C.1: Include developments of new single home construction, existing homes, or other surface disturbance totaling less than one acre.

1st Qtr: No new residential construction activity this quarter.

Task C.2: Coordinate public outreach efforts at County levels to strengthen visibility and durability of institutional controls.

1st Qtr: No significant activity this quarter. Introduction was made with Gary Hames, recently appointed Storey County Building Department Director, but this meeting was not a planned meeting between EPA, NDEP and Storey County. The purpose of the meeting being to assess the knowledge base and communication of the CRMS by municipal officials as part of the five-year review as described above.

Task C.3: Continue to develop and refine the environmental covenant website to track covenants attached to developed parcels making information more visible and easier to understand for the public and county governments.

1st Qtr: As discussed above in Task 1.C., Jacqueline Pursell attended a part of the OU1 Five - Year Review and with David Friedman described the development and plans for the NDEP CRMS geodatabase and web maps. Yajuan Pan, a recent graduate in the Masters' program from the University of Arizona, served as an intern at the Superfund Branch NDEP over parts of 4th quarter SFY2017 and 1st quarter SFY2018. Ms. Pan accomplished the review and upload of a number of soil investigations conducted on OU1 of the CRMS in accordance with the draft LTSRP in effect at the time.

The following property developments have been added to the CRMS geodatabase: Hidden Meadow Subdivision Phase I Unit 2 ; Mallard Estates Subdivision ; Dayton Valley Country Club Subdivision, Units 2E & 3B; River Ridge Estates Subdivision; Desert Winds Subdivision (Pond Express) ; Indian Hills Subdivision; Churchill Downs Estates; Glen Vista Subdivision ; Dayton Terrace Estates Subdivision ; Dayton Village Subdivision; Sutro West Subdivision; Rose Peak Highlands Subdivision Phase II; Canyon Estates Subdivision; Six Mile Ranchos Subdivision; Meadowood Subdivision; Daney Canyon Estates Subdivision; North Pointe Unit 123; Valley View Subdivision; Property at 65 Newman Court ; Empire Ranch Golf Course aka Darling Ranch Golf Course; Skyline Subdivision; Dayton State Park; Dayton Industrial Park Project Areas 1 & 2 ; USPS, Denver ; Sunrise Automotive ; Dayton Heights Subdivision ; Riverpark Subdivision (Units 1,2,8,14); updates to Riverpark Subdivision Units 11,12,13, and 15; Riverpark Subdivision Units 1-10, 14, and 16 -20; Riverpark Dune; updates to Onda Verde Estates; Santa Maria Ranch Phases I, II and III; Carson River Estates and Walmsley Estates Subdivision

D. Continue to refine the Area of Investigation maps for OU-1 as sampling data becomes available with a focus on eminent development.

1st Qtr: Continued review of new CRMS site wide map and OU2 maps with focus on new OU1 boundaries drawn outside the FEMA-defined floodway in and around Dayton as well as the OU2 boundaries and newly defined sub-unit boundaries.

E. Assist EPA with Draft Superfund State Contract.

1st Qtr:

Task III: CRMS Support OU-2

Provide NDEP oversight and involvement for all OU-2 activities in the RI/FS process.

Sub-tasks

- A. Development of a “Non-Residential” LTSRP and coordination with nonresidential interests (including commercial interests) in order to support soil disturbances in the CRMS that the OU-1 Record of Decision (ROD) does not address.

1st Qtr: No significant activity this quarter

- B. Participate in RI/FS process for OU -2 as necessary. EPA Remedial Project Manager (RPM) will coordinate efforts with NDEP.

1st Qtr: EPA Region 9 worked with Fallon Paiute and Shoshone Tribe to investigate possible contaminate uptake in cultural resources growing in the Stillwater Refuge. Primarily the cultural resource of interest is the cattail plant. NDEP did not play a significant role in this investigation.

- C. Participate in public meetings with EPA and stakeholders that require NDEP involvement. Attend other stakeholder meetings as needed. Assist with public information development and dissemination.

1st Qtr: No significant activity this quarter.

- D. Continue visibility of the health advisory signs concerning high level mercury in fish. Work with EPA and Nevada Department of Wildlife (NDOW) regarding commercial fishing advisories and commercial fishing permits.

1st Qtr: No significant activity this quarter.

Task IV: ANACONDA COPPER MINE SITE SUPPORT

Provide NDEP guidance and input for site-wide management of the Anaconda Copper Mine site.

Sub-tasks

- A. Participate in, or lead, site-wide strategy discussions with NDEP management, EPA management and staff, BLM management and staff, and Responsible Party (RP).

1st Qtr: Continued monthly conference calls with EPA, BLM and Atlantic Richfield (ARC), ensuring a more collaborative approach to site-wide strategy. Also upper NDEP management continued weekly strategy discussions with upper EPA management and upper BLM management.

- B. Develop and manage specific site-wide strategy goals and objectives, and identify and manage specific OU milestones and target dates.

1st Qtr: Continued monthly conference calls with EPA, BLM and ARC, refining specific OU goals and timelines for deliverables.

- C. Review technical documents (e.g. tech memos, data summary reports, work plans, engineering design plans).

1st Qtr:

NDEP reviewed the following documents:

- **Third Quarter Groundwater Monitoring Report, dated July 21, 2017;**
- **Third Quarter Domestic Well Monitoring Report, dated July 21, 2017;**
- **Phase I Evaporation Ponds DSR Update Report, dated August 18, 2017;**
- **Many OU-8 FMS weekly pond update reports; and,**
- **OU-8 FMS Monitoring Reports, dated 07/10/17, 08/10/17 and 09/11/17.**

- D. Participate in Technical Working Group (TWG) discussions. Attend or host meetings/calls and provide input.

1st Qtr: NDEP participated in the following TWG calls and meetings.

- **07/25 -OU-7 TWG call with EPA, Tribes, BLM, regarding OU-7 Weber Reservoir data;**
- **08/03 –OU-7 TWG call with EPA, Tribes, BLM and ARC, re: Weber Reservoir.**

- E. Participate in periodic site visits and inspections of specific OU facilities or ongoing activities, such as data collection, remedial action, and monitoring.

1st Qtr: No activity this quarter.

- F.

Task F.1: As the State prepares to take lead of OU-8, finalize OU-8 schedule and initiate contracting. Develop or assist in development of Proposed Plan, ROD and Responsiveness Summary.

1st Qtr: No activity this quarter.

Task F.2: Phase into potential State lead of OU-3 process area closure under State regulations and guidance.

1st Qtr: Continued discussions for potential State lead with ARC, EPA, BLM and stakeholders, including roundtable discussions with public and other stakeholders, and one on one meetings with other stakeholders, such as GBRW, City, County, Tribes, and YCAG.

Task F.3: As other OUs move closer to remedial action, take an active role in developing appropriate and timely/phased closure steps. Work with EPA to ensure other OU deliverable schedules are met.

1st Qtr: Continued in many discussions with EPA and BLM on scheduling of priority OU work, and leading discussions with key stakeholder groups and Tribes.

- G. Participate in public meetings with EPA and stakeholders that require NDEP involvement, including providing presentations. (EPA generally requires quarterly public meetings.) Attend other stakeholder meetings as needed. Assist with public information development and dissemination. Participate in updating CIP.

1st Qtr: Participated in one community roundtable meeting, dated 07/17/17, to discuss the potential of NPL deferral.